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FISH & RICHARDSON, P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER FERNANDEZ RIVAS, OMAR F	
			ART UNIT	PAPER NUMBER
			2129	

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/782,576

Applicant(s)

WU ET AL.

Examiner

Omar F. Fernández Rivas

Art Unit

2129

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>A1,A2,A3,A4</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to an AMENDMENT made by the Applicant entered on August 3, 2006.
2. The Office Action of April 13, 2006 is incorporated into this Final Office Action by reference.

Status of Claims

3. Claim 15 has been amended. Claims 1-15 are pending on this application.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakefuda in view of Goyal et al (US Patent #5,386,498, referred to as **Kakefuda**; US Patent Application #10/323,570, referred to as **Goyal**).

Claims 1 and 15

Kakefuda teaches a method for generating a new knowledge base (**Kakefuda**: abstract, L1-13; C1, L58-31), the method comprising: receiving a signal that defines content to be included in the new knowledge base (**Kakefuda**: abstract, L6-13; C1, L9-

Art Unit: 2129

15; C1, L62-68, C2, L1-15; C2, L35-42; Figs. 1 and 6A; Examiner's Note (EN): during the inference process, a signal is produced. The content is defined by the data extracted from the knowledge bases and external data input); searching for tables within an existing database and identifying at least one candidate table that is associated with data that may be relevant to the defined content to be included in the new knowledge base (**Kakefuda**: C3, L34-44; C3, L61-65; C5, L25-36; C6, L45-51; Fig. 2; EN: searching the program modules to extract the necessary knowledge base modules is the same as searching for tables. Tables can be considered as dividing the Knowledge base into modules).

Kakefuda does not teach determining at least one candidate application programming interface (API) for each candidate table; assessing combinations of the identified at least one candidate table and the determined at least one candidate API and selecting therefrom a master table and a master API for the new knowledge base; and generating the new knowledge base that is accessible by more than one application program within an integrated system.

Goyal teaches determining at least one candidate application programming interface (API) for each candidate table (**Goyal**: abstract, L1-9; page 1, par 13, L1-7; page 2, par 26, L1-11; Figs. 2 and 3; EN: the policy manager determines the policies (API) to communicate with the database (see paragraph 3 of the present application); assessing combinations of the identified at least one candidate table and the determined at least one candidate API and selecting therefrom a master table and a master API for the new knowledge base (**Goyal**: abstract, L1-9; page 1, par 13, L5-7;

Art Unit: 2129

page 2, par 28; page 3 par 40; pages 3-4 paragraphs 41-42; EN: determining the tablespace based on the policy rules is determining a master table and a master API); and generating the new knowledge base that is accessible by more than one application program within an integrated system (**Goyal**: page 1, par 13, L1-5; page 2, par 16, L1-5; EN: workload measures how many processes (programs) are accessing the knowledge base).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the teachings of Kakefuda by determining at least one candidate application programming interface (API) for each candidate table; assessing combinations of the identified at least one candidate table and the determined at least one candidate API and selecting therefrom a master table and a master API for the new knowledge base; and generating the new knowledge base that is accessible by more than one application program within an integrated system as taught by Goyal for the purpose of identifying which portion of the Knowledge base contains the data necessary to store in the new Knowledge base and the protocols needed by the application programs to access that data in the new database.

Claim 2

Kakefuda teaches the received signal is generated by an application program within the integrated system (**Kakefuda**: C3, L45-57; Fig. 2; EN: in a computer system all operations (signals) are generated by programs).

Art Unit: 2129

Claim 3

Kakefuda teaches the new knowledge base is generated in response to the received signal (**Kakefuda**: abstract, L1-13; C1 L58-61; C3, L45-57; Fig. 2; EN: synthesizing the knowledge base modules into one knowledge base is creating a new knowledge base).

Claim 4

Kakefuda teaches applying one or more heuristic rules to determine a score for each table and selecting candidate tables from among tables that score above a threshold score (**Kakefuda**: abstract, L13-21; C3 L34-44; C3, L61-68, C4, L1-31; C4, L68, C5, L1-6; Figs. 1, 4 and 5; EN: extracting the facts and production rules (heuristic rules) and determining a certainty factor (score)).

Claim 5

Kakefuda teaches adapting the heuristic rules based on experience to optimize performance of subsequently generated new knowledge bases (**Kakefuda**: C5, L10-54; Figs. 3-5; EN: tuning the certainty factors is adapting the rules).

Claim 6

Kakefuda does not teach assessing APIs and applying one or more heuristic rules to determine a score for each API and selecting candidate APIs from among APIs that score above a threshold score.

Goyal teaches assessing APIs and applying one or more heuristic rules to determine a score for each API and selecting candidate APIs from among APIs that

Art Unit: 2129

score above a threshold score (**Goyal**: page 3, par 40; page 4, par 42; Fig. 2-5; EN: applying the rules to determine restrictions (see example on priorities).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the teachings of Kakefuda by assessing APIs and applying one or more heuristic rules to determine a score for each API and selecting candidate APIs from among APIs that score above a threshold score as taught by Goyal for the purpose of selecting the API that best fits the data contents so that the data can be accessed.

Claim 7

Kakefuda teaches adapting the heuristic rules based on experience to optimize performance of subsequently generated new knowledge bases (**Kakefuda**: C5, L10-54; Figs. 3-5; EN: tuning the certainty factors is adapting the rules).

Claim 8

Kakefuda does not teach selecting at least one existing API to be one of the candidate APIs.

Goyal teaches selecting at least one existing API to be one of the candidate APIs (**Goyal**: page 1, par 13, L1-7; page 2, par 26, L1-11; EN: determining the policies is selecting an existing policy (API) as a candidate API).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the teachings of Kakefuda by incorporating selecting at least one existing API to be one of the candidate APIs as taught by Goyal for the purpose of having a protocol that is known to function with the data in the knowledge

base.

Claim 9

Takefuda does not teach generating code to create one of the candidate APIs.

Goyal teaches generating code to create one of the candidate APIs (**Goyal**: page 2, par 25, L1-6; page 3, par 40; page 4, claim 1, L4-5).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the teachings of Takefuda by incorporating generating code to create one of the candidate APIs as taught by Goyal for the purpose of obtaining code tailored to work on the data stored in the database so that programs can access the data.

Claim 10

Takefuda teaches testing the new knowledge base to verify that the new knowledge base is accessible by more than one application program within the integrated system (**Takefuda**: C1, L58-61; C5, L25-54; EN: verifying the knowledge base and tuning the certainty factors).

Claim 11

Takefuda does not teach the method runs as a background process relative to the application program.

Goyal teaches the method runs as a background process relative to the application program (**Goyal**: page 1, par 13, L12-15; EN: performing the process while the program (transaction) is still pending is running as a background process).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the teachings of Kakefuda by incorporating running the method as a background process relative to the application program as taught by Goyal for the purpose of being able to create the knowledge base without interrupting the running application.

Claim 12

Kakefuda teaches generating the new knowledge base with a single click from within the application program (**Kakefuda**: C3, L45-57; FIG. 2; EN: a user must use some sort of input device to input data to the system and start the process).

Claim 13

Kakefuda teaches selecting an icon on a display to trigger the received signal (**Kakefuda**: C3, L45-57; Fig. 2; EN: the user interfaces with the system via a CRT device)

Claim 14

Kakefuda teaches the integrated system comprises an enterprise system (**Kakefuda**: abstract, L1-6; C2, L35-40; EN: a system that attains different objects is an enterprise system).

Response to Applicant's arguments

Claim rejection under 35 USC 101

6. In light of the amendments made by the Applicant, the rejection under 35 USC 101 has been withdrawn.

Claim rejections under 35 USC 103

7. The Applicant's arguments regarding the rejection under 35 USC 103 have been fully considered but are not persuasive.

In reference to Applicant's arguments:

Applicants submit that independent: claims 1 and 15 define subject matter that is patentable over the cited references because neither the Kakefuda nor the Goyal references teach or suggest any of (1) determining an application programming interface (API), (2) assessing combinations of candidate tables and candidate APIs, or (3) selecting a master AP1 for a new knowledge base, all of which are required by Applicants' independent claims. In fact, nowhere does either cited reference mention or even contemplate APIs or application program interfaces.

Examiner's response:

All of the features identified by the applicant have been taught by relevant sections of Kakefuda and Goyal as set forth above. The Examiner has provided explanations as to how the references can be combined to obtain the above-identified features.

In reference to Applicant's arguments:

Neither of the cited references, when taken alone or together, teaches or suggests generating a new knowledge base in the manner recited in Applicants' claim 1 or claim 15. For example, neither reference suggests or even contemplates (i) determining an API, (ii) assessing combinations of at least one candidate table and at least one candidate API, or (iii) selecting a master API, as required by both independent claims. In fact, neither reference makes a single mention of an API. As such, the Office Action does not set forth a prima facie case of as to each element recited in Applicants' independent claims. For the following reasons, Applicants respectfully request that the Examiner reconsider and remove the obviousness *rejections* based on the cited references.

Art Unit: 2129

Examiner's response:

All of the features identified by the applicant have been taught by relevant sections of Kakefuda and Goyal as set forth above. The Examiner has provided explanations as to how the references can be combined to obtain the above-identified features.

In reference to Applicant's arguments:

First, neither reference, when taken alone or in combination, teaches or suggests "determining at least one candidate application programming interface (API) for each candidate table," as required by Applicants' claims.

The Office Action contends that the policies in the policy manager to communicate with the database, as disclosed in the Goyal reference, are the same as Applicants' recited "determining at least one candidate application programming interface (API) for each candidate table." (Office Action at pgs. 3-4.) In addition, the Office Action equates the API in Applicants' claims with the policies in the policy manager as described in the Goyal reference.

Applicants disagree with both of these contentions. As to the latter contention, the policy described in the Goyal reference is not similar to an API. As pointed out above, an API supplies an application program with metadata (e. g., format, data type, etc.) needed to reach the contents of the knowledge base. In contrast, the policies in the policy manager of the Goyal reference result in creation of a certain size allocation in a tablespace. Determining a site allocation of tablespace does not teach, suggest, or even contemplate an API that provides metadata to enable application programs to access data in a knowledge base. As such, the latter contention fails.

Accordingly, Applicants submit that the former contention also fails because the policies in the policy manager to communicate with the database do not teach or suggest "determining at least one candidate application programming interface (API) for each candidate table," as required by Applicants' claims. An API and a size allocation policy are quite different. Without a proper API, for example, a policy to vary the size of an allocation table as taught by the Goyal reference would not enable an application program to read or write data in a new knowledge base generated in accordance with Applicants' claims. Moreover, the Office Action does not point to any teaching or suggestion in any prior art reference for performing the recited determining step for each candidate table.

Examiner's response:

The claims and only the claims form the metes and bounds of the invention. The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Limitations appearing in the specification but not recited in the claim are not read into the claim. There is no mention of these limitations in the claims and the specification is not the measure of the invention. Therefore, limitations contained therein can not be read into the claims for the purpose of avoiding the prior art; see In re Sprock, 55 CCPA 743, 386 F.2d 924, 155 USPQ 687 (1968).

In the broadest reasonable sense, an API is set of software calls and routines that can be referenced by an application program in order to access supporting system or network services. The policy of the Goyal reference is a code that establishes communication between the policy managed storage system and the database (**Goyal**: page 1, par 13, L1-5; page 2, paragraph 26; Fig. 2), thus providing the API claimed by Applicant.

Regarding the limitation "performing the recited determining step for each candidate table", the tablespaces of the Goyal reference are considered to be candidate tables, which are managed by the policies. Moreover, in page 2, paragraph 28, the Goyal reference recites: "The database creates a policy managed tablespace. The storage policy manager is contacted for the storage allocation for the tablespace based on the policy name. The storage policy manager allocates storage based on the policy and the database uses the allocated storage for the tablespace". Therefore a policy (API) is determined for each tablespace (candidate table).

Art Unit: 2129

In reference to Applicant's arguments:

Second, neither reference, when taken alone or in combination, teaches or suggests "assessing combinations of the identified at least one candidate table and the determined at least one candidate API," as required by Applicants' claims.

The Office Action does not set forth any disclosure in the cited references that teaches or suggests several elements of this element of Applicants' claims. For example, as described above, the Goyal reference does not teach or suggest "determining at least one candidate API;" therefore, the Goyal reference does not teach or suggest "assessing combinations of... the determined at least one candidate API" as recited in Applicants' claims.

In addition, the Office Action does not point to any teaching or suggestion in the Goyal reference of "identifying at least one candidate table;" therefore, the Goyal reference does not teach or suggest "assessing combinations of ... the identified at least one candidate table" as recited in Applicants' claims.

Moreover, the Office Action does not point to any teaching or suggestion of "assessing combinations" as recited in Applicants' claims. The Office Action is silent as to how the Goyal reference discloses generating or assessing combinations, or what is being combined and assessed.

Examiner's response:

The claims and only the claims form the metes and bounds of the invention. The Examiner has full latitude to interpret each claim in the broadest reasonable sense. As set forth above, the Goyal reference does teach identifying an API and a candidate table. Tablespaces are contacted by policy name, therefore a combination of tablespace (candidate table) and policy (API) is being assessed.

In reference to Applicant's arguments:

Third, neither reference, when taken alone or in combination, teaches or suggests "selecting therefrom a master table and a master API for the new knowledge base," as required by Applicants' claims.

As to this element of Applicants' claims, the Office Action contends that "determining tablespace based on policy rules," as disclosed in the Goyal reference, is the same as "determining a master table and a master API" (Office Action at pg. 4.)

Art Unit: 2129

Applicants disagree. As described above, tablespace or policy rules as described by the Goyal reference do not teach or suggest an API. Neither do tablespace or policy rules as described by the Goyal reference teach or suggest a master table. Applicants' claims require a master table selected from at least one candidate table that is associated with data that may be relevant to the defined content to be included in the new knowledge base." The Goyal reference does not, and the Office Action has not contended that it does, teach or suggest the master table required in Applicants' claims.

Examiner's response:

The claims and only the claims form the metes and bounds of the invention. The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Limitations appearing in the specification but not recited in the claim are not read into the claim. There is no mention of these limitations in the claims and the specification is not the measure of the invention. Therefore, limitations contained therein can not be read into the claims for the purpose of avoiding the prior art; see In re Sprock, 55 CCPA 743, 386 F.2d 924, 155 USPQ 687 (1968).

When given the broadest reasonable interpretation, selecting a master table and a master API for the new knowledge base can be considered the same as determining a tablespace based on the policy rule or more specifically on the policy name as stated in page 2, paragraph 28 of the Goyal reference. There is nothing in the claim that specifies how the master table or the master API is selected. The arguments "...associated with data that may be relevant to the defined content to be included in the new knowledge base" are moot since there is no mention of these limitations in the claim.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Claims 1-15 are rejected.

Correspondence Information

10. Any inquires concerning this communication or earlier communications from the examiner should be directed to Omar F. Fernández Rivas, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-2589 or email omar.fernandez_rivas@uspto.gov.

If you need to send an Official facsimile transmission, please send it to (571) 273-8300.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, David Vincent, may be reached at (571) 272-3080.

Art Unit: 2129

Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

Omar F. Fernández Rivas
Patent Examiner
Artificial Intelligence Art Unit 2129
United States Department of Commerce
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Thursday, October 12, 2006

OFD


DAVID VINCENT 10/12/06
SUPERVISORY PATENT EXAMINER